

# Flying Around the World in Seven Days

Within 50 Years, It Is Predicted, It Will Be  
Done by a Speedy Air Boat

THE full line on the map indicates the probable route of a 'plane around the world. The broken line is the route followed by Jules Verne's traveller, who circled the globe in eighty days.

By Edgar H. Felix, A. I. R. E.  
Associate Editor of "Aerial Age Weekly"

ONLY a few years ago—when Thomas Edison was twenty-five years old—Jules Verne wrote "A Tour of the World in Eighty Days." Two years before he had written his "Twenty Thousand Leagues Under the Sea," in which he described the voyage of a boat travelling under water. When Jules Verne insisted that these books were not mere fiction but that they portrayed the possibilities of the century to come, several members of French scientific societies declared him "insane"—and that was only forty-six years ago! What progress the last fifty years has seen! But instead of fifty, consider only the last twenty, the last fifteen, the last ten years! Progress in all things, but especially in aeronautics. Sixteen years ago the Wright brothers performed a phenomenal feat—they flew the length of three city blocks in a heavier-than-air machine. Ten years ago Blériot flew across the English Channel—twenty miles—and the world marvelled. Three months ago a land airplane crossed the Atlantic—1,960 miles—in a non-stop flight. From twenty miles in 1909 to nearly 2,000 miles in 1919 shows the ten-year progress in distance covered. From the maximum speed of fifty-five miles an hour in 1909 to the maximum of 200 miles an hour in 1919 shows the ten-year progress in speed.

Of course, we shall soon fly around the world, but the first trip will take months, just as the first recorded trip across the Atlantic—the voyage of Columbus—took nearly three months, although the Atlantic has now been crossed in less than five days by steamship and in sixteen hours by airplane. While the pilots of the first air trip around the world will devote all their attention to covering distance, those who make the first trip around the world in a week will centre their attention on speed.

## Types and Routes

Let us consider first the feat of merely flying around the world; what has already been done; what more must be done to make it possible; what type of aircraft will be chosen; what routes will be selected; how soon will the trip be made?

Already a dirigible and a land airplane in non-stop flights have crossed the Atlantic Ocean. The dirigible covered 3,200 and the airplane 1,960 miles. The longest non-stop flight necessary to fly around the world will be required in jumping from the Hawaiian Islands to San Francisco—2,100 miles. That is but 140 miles longer than the 1,960 miles already traversed in the non-stop flight across the Atlantic; and since non-stop flights have progressed from one-sixth of one mile to 1,960 miles today in the last sixteen years, non-stop flights of 2,100 miles are certainly within a short time. But non-stop transoceanic flights may not be necessary in an around-the-world flight. The crossing of the Atlan-

tic by the NC-4 has brought the flying boat to the fore.

Each transatlantic flight—that of the flying boat, that of the dirigible, that of the land 'plane—has demonstrated the advantages and disadvantages of each type of craft. Which will be chosen for the first flight around the world? What are the special advantages of each?

The transatlantic flight of the NC-4 demonstrated the capabilities of the flying boat. It proved itself self-reliant in the face of storm and fog. Fifteen men were carried over 1,300 miles into adverse weather. But the seaworthy qualities of the flying boat brought them all to safety. Improved construction, larger size and greater efficiency—all these developments will come quickly—will make this type of craft superior to any means of travel man has yet devised for crossing the Atlantic with utmost safety with mail, press dispatches, et cetera.

## The R-34's Record

The two crossings of the magnificent British dirigible R-34 proved the airworthiness and stability of the giant airship. Although she encountered adverse weather, which prolonged her westward flight to 108 hours, the mighty craft, 670 feet long, made her way to the appointed landing place without difficulty. The return journey was made in better time—three days three hours and three minutes.

The great lifting power of the dirigible will make it the fast freight and heavy mail carrier of the future. It is probable she will never be able to compete with the ultra-speedy flying boat in the carrying of urgent mail and documents, but her services will be much more extensive. The volume of mail and the number of passengers carried by dirigibles will be many times that of flying boats. But great landing places and mammoth supply stations are necessary. As these will not be established over

the world for some time it is probable the dirigible will not be chosen for the first around-the-world flight.

The speediest trip across the Atlantic was made by the Vickers-Vimy biplane. It averaged 120 miles an hour, and covered the distance in sixteen hours. The flight was a glorious achievement, but it does not even suggest that the land machine will come into general use for long distance overseas flying nor that it will be used in the first air trip around the world. A forced landing for repairs in midocean would mean not only the end of the flight but the end of the machine, and probably of the aviators also. Despite the success of the flight of the Vickers-Vimy, the aviators who piloted her declared that in the future the flying boat would be the type of craft best fitted and safest for transoceanic flying.

## The Best Craft

For the first around-the-world flight there will be no landing facilities for dirigibles. Land 'planes will be eliminated because of the necessity of suitable landing fields for them and their helplessness over the water in case of forced descent. The aircraft most fitted to make the journey is the flying boat. The fact that the flying boat can be refuelled at sea from ships, its damaged motors attended to, propellers replaced and other minor repairs made while on the water will make it the first choice of aviators planning an around-the-world flight.

How soon will the trip be made? The NC-4 took a 1,300-mile stretch from St. John's to the Azores in one flight. This represents approximately the limit of distance attainable at present by a machine of that type in a non-stop flight. But improvements already being planned by engineers and ready to be carried into execution will so increase the range of flight for this type of craft that an around-the-world flight in easy stages will soon be possible. That the flight will be attempted

within the next year or two is certain. Increased reliability of present types of aircraft is all that is necessary to make possible such a flight by easy stages.

## Out from Rockaway

The first attempt to fly around the world will be made along routes where protected waters are within reasonable flying range. Prevailing winds favor a west to east flight. For more than sentimental reasons, it is likely that the start will be made from Rockaway and the first stop will be at the midocean airport, the Azores. It will be unnecessary to fly north to St. John's, because, within the year, improvements will make direct flights from Rockaway to the Azores possible.

From the Azores to Lisbon and then to Gibraltar will offer no particular difficulties. Nor will there be lack of fuel and repair stations on the flight through the Mediterranean, with the southern ports of France, Italy and Greece at the disposal of the aerial Magellans. From Greece the course will turn southward, much as the medieval trade route, along the coasts of Turkey and Arabia, over the Red Sea and the Arabian Sea to India.

## Around the World In Eighty Days

Route Taken by Jules Verne, Alias Phileas Fogg,  
in His Famous and Then Almost Miraculous  
Jaunt Around the Circle in 1872

	Days
FROM London to Suez via Mont Cenis and Brindisi, by rail and steamboats	7
From Suez to Bombay, by steamer	13
From Bombay to Calcutta, by rail	3
From Calcutta to Hong Kong, by steamer	13
From Hong Kong to Yokohama, by steamer	6
From Yokohama to San Francisco, by steamer	22
From San Francisco to New York, by rail	7
From New York to London, by steamer and rail	9
Total	80

From India to the Philippines, via Sumatra, Java and Borneo, the route will also follow lanes soon to be explored—along the India to Australia route, about two-thirds of the way. The next stage of the journey, from the Philippines to the west coast of North America, will present the greatest difficulties to the around-the-world flier. Although there are numerous islands in the Pacific, the first attempt will be made so soon that few of these airports will have been developed. Around-the-world trips, involving thousands of extra miles of travel, will be necessary during the next few years, although ultimately more direct travel routes will be established. The first trip across the Pacific may be from the Philippines to the Marshall Islands, then to the Hawaiian Islands, and lastly to the California mainland.

## Another Route

Another route which some flying boat aviators are considering leads from the Philippines up the Japanese coast to Kamchatka, across the Bering Sea, down the Alaskan coast, south all the way to the Isthmus of Panama, across the Isthmus, the Gulf of Mexico and finally

up the Atlantic coast to the starting point.

This first flight will not be more difficult for flying boats—as they will be developed in less than two years—than the New York to Paris automobile trip across the American continent and over Siberia was for the automobile. It is less a question of flying range than of endurance. There is little doubt the craft will be able to withstand the storms encountered or be able to cover the long jumps—many over a thousand miles each. Will the motors and hull withstand the pound and tear of the 45,000-mile flight? This is now the question of importance.

The first flight will be interesting, dramatic, phenomenal, but much progress must be made before such flights become practical and capable of giving efficient service. For regular trips it is probable the long distance dirigible will be employed, but the development of adequate airports will postpone establishment of regular trips by such craft for some time. The discovery or development of gases of considerably more lifting power than hydrogen will make more rapid flight of dirigibles possible at extremely high altitudes, where winds 200 and 300 miles an hour will assist the airship. There will be no oxygen difficulties—the hull in which the crew operates will be airtight with oxygen supplied from tanks—pressure will be the same as on the ground.

## Inventions Needed

On the other hand, serviceable flying around the world will not come into its own until many radical improvements are made. The most important of these inventions will be wireless transmission of power. Instead of carrying gasoline fuel weighing many tons, antennal will gather the energy from the ether. But, serviceable or not, the flights across the Atlantic have not been serviceable from a commercial or purely utilitarian viewpoint—an aerial trip around the world will soon be made.

Now let us consider flying around the world in a week. To accomplish this there must be progress in the speed of the machines of to-day. We can judge somewhat of the future by the past. What has been the progress in speed in the last fifty years—that is, since 1869?

What may be the progress during the next fifty years—that is, by 1969?

As to transportation on water: the average fast speed of the Great Eastern was 13.7 knots per hour; the average per hour for the fastest day's run of the Mauretania was 27.04 knots; an approximate increase of 100 per cent. In 1869 the City of Brussels crossed the Atlantic in 117 minutes less than eight days; in 1909 the Mauretania crossed in four days, ten hours and forty-one minutes—only 56 per cent of the time it took the City of Brussels forty years before.

In air travelling the maximum 23 miles an hour speed of Le Geant in 1863 is now the maximum 70 miles an hour speed of the R-34. The record speed of 55 miles an hour by a heavier-than-air-plane in 1909 is now put in the background by the 200 miles an hour of exceptional combat 'planes and the average of 120 miles an hour of the Vickers-Vimy in its transatlantic flight. What will the future bring in increase of speed? How fast will airplanes fly in fifty years, in 1969?

## In Fifty Years?

Moreover, the greatest distance covered in a non-stop flight by a heavier-than-air-plane in 1902 was but one-sixth of one mile. Compare that with the 1,960 miles now covered in a non-stop flight—an increase of 1,170,000 per cent in but sixteen and one-half years. What distances may not airplanes cover in non-stop flights within the next fifty years?

In making the record speed trip, in flying around the world in a week, we shall stop for fuel and change of machines just as a hundred years ago coaches from New York to Philadelphia stopped for change of horses, just as our present five-day railway trains from New York to San Francisco stop for change of locomotives, and just as our present record trip around the world was made by changing from steamboat to railway train and from railway train to steamboat. In flying around the world in a week many stops and quick changes will be made; change of machines will be made, both the land plane and the flying boat will be used. All these stops and changes will be possible for airports with

THE type of aircraft that will make the trip around the world is probably the flying boat. Two of the NC-4 class are shown above, photographed when they started over the Atlantic.

supplies, and machines will soon, very soon, dot the continents and the islands of all the seas. Think what has been done in this line in a few short months, since the signing of the armistice!

Although in the use of aircraft and in preparation for the future the United States is behind other leading nations, yet we now have an aerial mail route established between Washington and Philadelphia and Philadelphia and New York, and another connects New York, Cleveland and Chicago. England has a regular aerial mail service between London and Paris, and another between London and Cologne that saves three days in the delivery of mail. Belgium has an aerial mail service between Brussels and Paris; France has such a service radiating from Paris to Lyons and Marseilles, and another from Paris to Bordeaux. In Italy Naples, Rome, Turin, Milan and Venice are linked together by regular aerial mail service. For six months Germany has maintained daily aerial mail service between Berlin and Hamburg.

## More Has Been Done

But these European nations have done more than establish aerial mail service. England has a daily aerial passenger service between London and Paris; there is a bi-weekly aerial passenger service between Paris and Brussels. The Italians are daily carrying passengers—fifteen per machine per trip—both by dirigible and airplane, from Rome to Milan and from Milan to Rome. The aerial passenger service of Germany connects Berlin with Leipzig, with Weimar, with Frankfurt, and with the coast resorts.

France is extending her lines into Morocco and Algeria. Italy is making like preparations to connect its homeland with its colonies. England is mapping airways between the Motherland and her most distant colonies. Already, since the signing of the armistice, her airplanes have flown from London to India, a distance greater than that from New York to Buenos Ayres, preparing the way for regular trips in the near future. Along this route she has established signalling stations, supply stations and repair stations. And England's routes are being laid out and traversed from London to Africa and northward from Cape Town. She is also preparing a route from India to Australia.

Soon the continents and the oceans will be covered by air routes as definite as the steamship routes to-day, and along each of these routes there will be signalling, supply and repair stations, as well as extensive landing and "taking off" fields.

## Around the World

With air routes mapped out and in use all over the world, with airports established on mainlands and on islands of the seas, with improvements of machines giving added endurance and reliability, with the attainment of increased speed—who shall ridicule the possibility and probability—yes, the certainty—within the next fifty years—of a trip around the world in a week?

Poor Jules Verne—discredited fifty years ago—even called insane, because he prophesied that boats would some day travel under water and that a trip around the world would be made in eighty days; poor Jules Verne—whose prophesies are of so little use to-day—they are now so far behind the times! Fifty years have seen the journey around the world reduced from over a year to three months. The next fifty years will see it reduced from three months to a week!